HONOLULU ENGINEER DISTRICT

The civil works responsibilities of the Honolulu District encompass the State of Hawaii, the Territory of Guam, the Territory of American Samoa, and the Commonwealth of the Northern Mariana Islands. The district is unique in that its area of responsibility is totally comprised of islands dispersed over an ocean environment exceeding 6 million square miles.

IMPROVEMENTS

Navigation

1. KIKIAOLA SMALL BOAT HARBOR, KAUAI, HAWAII

Location. Kikiaola Harbor is located on the southwest coast of the island of Kauai, approximately 1 mile southeast of Kekaha and approximately 2 miles west of Waimea (See NOAA Chart 19386)

Existing project. The authorized project consists of removing a 150-foot long portion from an existing outer east stub breakwater; removing and reconstructing a 71-foot long inner east stub breakwater; modifying 245-foot long portion of the existing west breakwater; modifying 820-foot long portion of the existing east breakwater; dredging a new 725-foot long entrance channel to a depth of 11-feet and varying in width from 105 to 205-feet; and dredging a 320-foot long access channel to a 7-foot depth and varying in width from 70 to 105-feet.

Local cooperation. The Project Cooperation Agreement (PCA) was executed in August 2005.

Terminal facilities. There is an existing 1,280–foot long east breakwater with two short stub breakwaters; a 600-foot long west breakwater; a 225-foot long inner breakwater; a 150-foot long by 10-foot wide wooden wharf; a 50-foot long loading dock and adjacent launch ramp, all constructed by the State of Hawaii.

Operations during fiscal year. Work during the Fiscal Year included completing a Limited Reevaluation Report to update the Project Cooperation agreement and reconfirm project economics; signing the PCA; advertising and opening bids for project construction. The solicitation was cancelled because the proposal costs were excessively high. Total costs incurred during the Fiscal Year were $300,276.

2. MAALAEA HARBOR, MAUI, HAWAII

Location. Maalaea Bay is situated on the southwest coast of Maui, approximately 7 miles south of Wailuku, the county seat of Maui. (See NOAA Chart 19350)

Existing project. For a description of the existing project, see page 36–3 of the Fiscal Year 1989 Annual Report. (See Table 36–B for Authorizing Legislation)

Local cooperation. The Project Cooperation Agreement (PCA) is delayed due to concerns raised as a result of the Supplemental Environmental Impact Statement review.

Terminal facilities. There is an existing 1,000–foot long south breakwater, a 870–foot long east breakwater, 300–foot long wharf, 90–foot wide entrance channel, and a single lane launch ramp, all constructed by the State of Hawaii.

Operations during fiscal year. Work during the Fiscal Year included preparation of the Limited Reevaluation Report, coordination with the local sponsor and various agencies on resolving controversial environmental issues and continuing development of acceptable mitigation features for impacts to environmental resources. Total costs incurred during the Fiscal Year were $145,717.

3. KAUMALAPAU HARBOR, LANAI, HAWAII

Location. The project is located on the southwestern coast of the Island of Lanai. (See NOAA Chart 19351)

Existing project. The project would repair the existing breakwater built in 1925 that was previously owned by private interests. The existing breakwater will be repaired using 35-ton Core Loc concrete armor units. The length of the breakwater will be 320 feet long.

Local cooperation. The Project Cooperation Agreement (PCA) was executed in September 2003. Requirements are described in full on page 31-2 of the Fiscal Year 2003 Annual Report.

Terminal Facilities. A 200-foot long rubblemound breakwater with a crest elevation of about +10 feet protects a 400-foot long wharf which is operated and owned by the State of Hawaii Harbors Division.

Operations during fiscal year. The contractor completed mobilization of equipment and initiated the test casting of concrete core loc units. Total costs incurred during the Fiscal Year were $3,202,872.

4. KAHULUI LIGHT DRAFT HARBOR, MAUI, HAWAII

Location. The Kahului Light Draft Harbor site is located within the Kahului Deep Draft Harbor on the northern coast of the Island of Maui. (See NOAA Chart 19342)

Existing project. The project includes removing an existing rock groin; constructing a 130-foot long rubblemound breakwater structure; dredging an entrance channel 1,030 feet long, 50 feet wide and 9.5 feet deep; and dredging a turning basin 100 feet long, 100 feet wide and 8.5 feet deep.

Local cooperation. The Project Cooperation Agreement (PCA) was executed in May 2003. Requirements are described in full on page 31-2 of the Fiscal Year 2004 Annual Report.

Terminal Facilities. A damaged rubblemound breakwater protects the harbor basin approximately 30

feet in length, with a crest elevation of about 8 feet. There is an existing single-lane boat launch ramp, a wooden dock, and an entrance channel and turning basin dredged to a depth of minus 6.0 feet mean lower low water. All existing facilities were constructed by the State of Hawaii.

Operations during fiscal year. The construction groundbreaking occurred in May 2005. The majority of dredging work for this project was completed during the fiscal year. Total costs incurred during the Fiscal Year were $1,896,616.

5. RECONNAISSANCE AND CONDITION SURVEYS

Condition surveys were conducted by the Portland District at Barbers Point Harbor, Haleiwa Small Boat Harbor, Honolulu Harbor, Waianae Small Boat Harbor on the island of Oahu, HI; Kahului Harbor on the island of Maui, HI; Nawiliwili Deep Draft Harbor on the island of Kauai, HI; Hilo Harbor on the island of Hawaii, HI; Aunuu Small Boat Harbor, Auasi Small Boat Harbor, Ofu Harbor and Tau Harbor, American Samoa. A condition survey was conducted by the US Army 7th Engineer Dive Detachment at Rota Harbor, Commonwealth of the Mariana Islands during Fiscal Year 2005. Total cost to conduct the surveys was $69,623. See Table 31-H for navigation inspections performed during the Fiscal Year.

6. INSPECTION OF COMPLETED FLOOD CONTROL AND BEACH EROSION CONTROL PROJECTS

Inspection of completed local flood protection projects is performed periodically in compliance with Section 208.10, of Title 33, Code of Federal Regulations, which contains regulations for operation and maintenance of local flood-protection works approved by the Secretary of the Army in accordance with authority in Section 3, Flood Control Act of June 22, 1936.

Inspection costs for completed flood control and beach erosion control projects incurred during the Fiscal Year were $152,766. See Table 31-I for inspections performed during the Fiscal Year.

7. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Section 107, Public Law 86–645, as amended (Preauthorization). See Table 31-J.

Beach Erosion Control

8. LAUNIUPOKO SHORELINE PROTECTION, MAUI, HAWAII

Location. The project is located on the western coast of the Island of Maui. The Island of Maui is located approximately 100 miles southeast of Honolulu, Hawaii. (See NOAA Chart 19348)

Existing project. The project construction consists of two reaches, totaling approximately 500 feet, of rubble mound revetments with a crest elevation of +12-feet (MLLW). The single layer revetment will be constructed of 1600-2500 pound armor stone, over a 2-foot thick underlayer of 50-150 pound stone.

Local cooperation. The Project Cooperation Agreement (PCA) was executed in January 2002. Requirements are described in full on Page 31-3 of the Fiscal Year 2002 Annual Report.

Operations during fiscal year. The construction contract for improvements was terminated for convenience by the Government on March 2005 due to significant differing site conditions. Preparation of revised plans and specifications were initiated during the Fiscal Year. Total costs incurred during the Fiscal Year were $73,984.

9. BEACH EROSION WORK UNDER SPECIAL AUTHORIZATION

Emergency streambank and shoreline protection activities pursuant to Section 14, Public Law 79–526, as amended (Preauthorization). See Table 31–K.

Beach Erosion control activities pursuant to Section 103, Public Law 87-874, as amended (Preauthorization). See Table 31-L.

Shoreline Erosion control development and demonstration program pursuant to Section 227, Public Law 104-303, as amended. Fiscal Year costs were $155,731.

Flood Control

10. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood control activities pursuant to Section 205, Public Law 80–858, as amended (Preauthorization). See Table 31-M.

Project Modifications for Improvements of Environment pursuant to Section 1135, Public Law 99–662, as amended (Preauthorization).

See Table 31-N.

Aquatic Ecosystem Restoration pursuant to Section 206, Public Law 104-303. (Preauthorization)
Fiscal Year costs were $26,204 for Saipan Lagoon, CNMI; $2,916 to conduct initial appraisal reports; and $261 for coordination with other agencies.

Emergency flood control activities pursuant to Public Law 84–99.
Federal cost during the Fiscal Year for Flood Control and Coastal Emergencies appropriation was $831,910 of which $406,890 was for disaster preparedness; and $111,632 for emergency operations; $313,388 for rehabilitation and inspections.

General Investigations

11. SURVEYS

Fiscal Year costs were $936,355 of which $288,703 was for navigation studies; $136,422 was for flood damage prevention studies; $412,852 for special studies; $78,119 for miscellaneous activities; and $20,259 for coordination with other agencies. In addition, $106,978 in non–Federal funds for coordination with other agencies; $99,348 for cost–shared navigation studies; and $138,660 for cost-shared special studies.

12. COLLECTION AND STUDY OF BASIC DATA

Flood plain management services. The Flood Plain Management Services Program is authorized and implemented under Section 206, PL 86–645, 1960 Flood Control Act, as amended. Through technical services and planning guidance, the program provides information on floods and flood related information to improve planning for the careful use of the nation's flood plains, thereby reducing the potential for losses to life and property from floods and wave actions. Non–Federal agencies are assisted with flood hazard evaluation and planning information for flood and coastal hazard areas without charge.
As of November 1991, Federal agencies and private entities were also offered these services on a cost recovery basis. This assistance is in the form of local flood plain regulations, National Flood Insurance Requirements, and Executive Order 11988 requirements for federal agencies. Such assistance may include flood information and timing, floodwater velocity, extent of flooding, duration of flooding, flood frequency and regulatory floodway limits.

Services accomplished during fiscal year. There were 584 site requests for technical services and planning assistance and publication responses. These services were requested and provided to Federal agencies, state and local government agencies, individuals, realtors, corporations, lending institutions, engineers, architects and other private parties. Costs for providing these services during the fiscal year were $520,805.
Hydrologic Studies. Storm studies cost was $41,300. Total costs for collection and study of basic data during the Fiscal Year were $562,105.

TABLE 31–A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY02	FY03	FY04	FY05	Total Cost to Sept. 30, 2005
1.	Kikiaola Small	New Work:					
	Boat Harbor	Approp.	81,000	95,000	219,000	2,221,000	4,000,000
	Kauai, HI	Cost	95,465	97,924	158,277	300,276	2,010,351
	(Federal Funds)						
2.	Maalaea Harbor	New Work:					
	Maui, HI	Approp.	223,000	284,000	198,000	89,000	4,776,700
	(Federal Funds)	Cost	229,799	140,217	175,515	145,717	4,600,933
3.	Kaumalapau Harbor	New Work:					
	Lanai, HI	Approp.	1,300,000	994,000	2,483,000	2,978,000	10,749,000
	(Federal Funds)	Cost	324,455	95,849	207,762	3,202,872	3,931,932
4.	Kahului Light Draft	New Work:					
	Harbor, Maui, HI	Approp.	---	---	200,000	2,196,000	2,396,000
	(Federal Funds)	Cost	---	---	---	1,896,616	1,896,616
	(Contributed	Contrib.	---	---	244,000	114,000	358,000
	Funds)	Cost	---	---	---	280,056	280,056
7.	Launiupoko	New Work:					
	Shoreline Protection	Approp.	292,000	-61,000	210,000	---	600,000
	Maui, HI	Cost	34,869	39,737	10,570	73,984	316,354
	(Federal Funds)						
	(Contributed	Contrib.	---	244,000	---	---	244,000
	Funds)	Cost	3,533	12,160	5,001	90,550	111,244

TABLE 31–B AUTHORIZING LEGISLATION

See Section In Text	Date Authorizing Act	Project and Work Authorized	Documents
1.		**KIKIAOLA SMALL BOAT HARBOR, KAUAI, HAWAII**	
	Aug. 3, 1968	A 700–foot long, 105 to 205–foot wide, and 11–foot deep entrance channel; a 320-foot long, 70 to 105–foot wide, and 7-foot deep access channel; modification of 220–foot portion of the existing west breakwater; and modification of 820-foot portion of the existing east breakwater; removal and reconstruction of an 85-foot long inner east breakwater; removal of a 150-foot long portion of the existing outer east stub breakwater.	Sec 101, PL 90–483 Cong., 2nd sess.
2.		**MAALAEA HARBOR, MAUI, HAWAII**	
	Aug. 3, 1968	A 620–foot long extension of the south breakwater, a new 610–foot length, 150 to 180–foot width, 12 to 15–foot depth entrance channel, a 1.7 acre and 12–foot depth turning basin and a 720–foot length, 80–foot width and an 8–foot deep access channel.	Sec 101, PL 90–483 Cong., 2nd sess.
3.		**KAUMALAPAU HARBOR, LANAI, HAWAII**	
	Oct. 27, 2000	Repair existing breakwater using 35-ton core loc concrete armor units. The length of the repaired breakwater will be 320 feet.	Sec 1(a), PL 106-377 Cong, 2nd sess.
4.		**KAHULUI LIGHT DRAFT HARBOR, MAUI, HAWAII**	
	Jul. 14, 1960 As amended	Removal of existing rock groin; a 130–foot long rubblemound breakwater structure; a 1,030–foot long, 50–foot wide and 9.5–foot deep entrance channel; and a 100–foot long, 100–foot wide, and 8.5–foot deep turning basin.	Sec 107, PL 86-645 Authorized by POD Sep. 4, 2002
7.		**LAUNIUPOKO SHORELINE PROTECTION, MAUI, HAWAII**	
	Jul. 24, 1946 As amended	Two reaches of rubble mound revetment totaling 500 feet in length; the single layer revetment constructed of 1,600 to 2,500 pound armor stone, over a 2-foot underlayer of 50 to 150 pound stone.	Sec 14, PL 79–526 Authorized by POD Dec. 27, 2001

TABLE 31–C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report for:	Cost to September 2005	
			Construction	Operations and Maintenance
Agana Small Boat Harbor, Guam	Completed	1978	$ 937,798 [1]	$ 52,555
Agat Harbor, Guam	Completed	1989	2,000,000 [2]	---
Auasi Harbor, American Samoa	Completed	1982	1,033,015 [3]	141,797
Aunuu Harbor, American Samoa	Completed	1982	1,783,129 [4]	1,413,179
Barbers Point Harbor, Oahu, Hawaii	Completed	1990	53,519,193 [5]	2,247,953
Haleiwa Small Boat Harbor, Oahu, Hawaii	Completed	1978	527,047 [6]	498,402
Hilo Harbor, Hawaii, Hawaii	Completed	1991	5,512,440	4,106,308
Honokohau Small Boat Harbor, Hawaii, Hawaii	Completed	1971	781,036 [7]	63,693
Honolulu Harbor, Oahu, Hawaii	Completed	1985	16,044,095 [8]	4,803,941
Kahului Beach Road, Maui, Hawaii	Completed	1976	751,867 [9]	---
Kahului Harbor, Maui, Hawaii	Completed	1984	7,203,221 [10]	9,103,320
Kalaupapa Harbor, Molokai, Hawaii	Completed	1968	157,997 [9]	3,127
Kaulana Bay Boat Harbor, Hawaii, Hawaii	Inactive	1990	171,400	---
Kawaihae Harbor, Hawaii, Hawaii	Completed	1998	12,043,843 [11]	61,800
Keehi Lagoon, Oahu, Hawaii	Completed	1956	3,348,000 [12]	41,857
Kikiaola Small Boat Harbor, Kauai, Hawaii	Active	1981	193,000	---
Laupahoehoe Harbor, Hawaii, Hawaii	Completed	1990	3,623,450 [13]	---
Manele Bay Small Boat Harbor, Lanai, Hawaii	Completed	1986	372,000 [14]	1,399,004
Nawiliwili Harbor, Kauai, Hawaii	Completed	1987	2,127,724 [15]	11,047,275
Nawiliwili Small Boat Harbor, Kauai, Hawaii	Completed	1976	584,513 [16]	30,707
Ofu Small Boat Harbor, American Samoa	Completed	1976	980,018 [17]	5,102,316
Pohoiki Bay, Hawaii, Hawaii	Completed	1979	432,523 [9]	---
Port Allen Harbor, Kauai, Hawaii	Completed	1984	752,645 [18]	3,258,564
Rota Harbor, CNMI	Completed	1985	2,000,000 [19]	552,042
Saipan Small Boat Harbor, CNMI	Deferred	1982	194,000	---
Tau Small Boat Harbor, American Samoa	Completed	1985	1,991,569 [20]	593,111
Waianae Small Boat Harbor, Oahu, Hawaii	Completed	1979	1,940,011 [21]	122,400
Welles Harbor, Midway Island	Completed	1950	2,448,056 [22]	2,111

[1] Authorized by the Chief of Engineers. In addition, Contributed Funds of $282,474 for Construction.

[2] In addition, Contributed Funds of $1,239,364 for Construction.

[3] Authorized by the Chief of Engineers. In addition, Contributed Funds of $86,563 for Construction.

[4] Authorized by the Chief of Engineers. In addition, Contributed Funds of $231,437 for Construction.

[5] In addition, Contributed Funds of $2,402,909 for Construction.

[6] Authorized by the Chief of Engineers. In addition, Contributed Funds of $410,077 for Construction and $84,388 for Operation and Maintenance.

[7] In addition, Contributed Funds of $630,568 for Construction.

[8] In addition, Contributed Funds of $201,282 for Construction.

[9] Authorized by the Chief of Engineers.

[10] In addition, Contributed Funds of $30,200 for Construction.

[11] In addition, Contributed Funds of $647,569 for Construction.

[12] Abandonment authorized by R & H Act of 1965 (HD 98, 89th Congress, 1st Session).

[13] Authorized by the Chief of Engineers. In addition, Contributed Funds of $364,757 for Construction.

[14] In addition, Contributed Funds of $370,845 for Construction.

[15] In addition, Contributed Funds of $223,261 for Construction.

[16] Authorized by the Chief of Engineers and completed in November 1974. In addition, Contributed Funds of $405,471 for Construction.

[17] Authorized by the Chief of Engineers. In addition, Contributed Funds of $61,953 for Construction.

[18] In addition, Contributed Funds of $200,000 for Construction.

[19] Authorized by the Chief of Engineers. In addition, Contributed Funds of $774,373 for Construction.

[20] Authorized by the Chief of Engineers. In addition, Contributed Funds of $54,034 for Construction.

[21] In addition, Contributed Funds of $1,791,068 for Construction.

[22] Completed in 1941 and Maintenance transferred to Department of Navy.

TABLE 31–D OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS

Project	Status	For Last Full Report See Annual Report for:	Cost to September 2005	
			Construction	Operations and Maintenance
Afono Area and Aoa Area, American Samoa	Completed	1978	$ 254,015 [1]	$ ---
Alii Drive, Hawaii, Hawaii	Completed	2000	103,000 [16]	---
Asquiroga Bay, Guam	Completed	1986	227,181 [2]	---
Haleiwa Beach, Oahu, Hawaii	Completed	1967	240,148 [3]	---
Kaaawa Beach, Oahu, Hawaii	Completed	1976	176,488 [4]	---
Kapaa Town, Kauai, Hawaii	Completed	1977	158,916 [5]	---
Kekaha Beach, Kauai, Hawaii	Completed	1981	999,996 [6]	---
Kihei Beach, Maui, Hawaii	Completed	1972	154,313 [7]	---
Kualoa Regional Park, Oahu, Hawaii	Terminated	1982	355,472 [8]	---
Lepua Area, American Samoa	Completed	1992	1,706,225 [9]	---
Masefau Bay, American Samoa	Completed	1992	500,000 [2]	---
Matafao Shoreline, American Samoa	Completed	1984	225,000 [2]	---
Ofu Airstrip, American Samoa	Completed	1987	189,500	---
Pago Pago Airport, American Samoa	Completed	1984	174,941 [2]	---
Pago Pago to Nuuuli, American Samoa	Deferred	1978	394,187 [10]	---
Poloa Area, American Samoa	Completed	1978	136,040 [11]	---
Saipan Beach Road, CNMI	Completed	1992	176,000 [2]	---
Sand Island, Oahu, Hawaii	Completed	1981	301,879 [12]	---
Sand Island Shore Protection, Oahu, Hawaii	Completed	1992	1,313,400 [13]	---
Vatia Area, American Samoa	Completed	1978	154,309 [14]	---
Waikiki Beach, Oahu, Hawaii	Deferred	1979	729,087 [15]	183,000

[1]Authorized by the Chief of Engineers. In addition, $209,549 in Contributed Funds.

[2]Authorized by the Chief of Engineers.

[3]In addition, $160,098 in Contributed Funds.

[4]Authorized by the Chief of Engineers. In addition, $97,075 in Contributed Funds.

[5]Authorized by the Chief of Engineers. In addition, $56,916 in Contributed Funds.

[6]Authorized by the Chief of Engineers. In addition, $1,672,524 in Contributed funds.

[7]Authorized by the Chief of Engineers. In addition, $1,672,524 in Contributed Funds.

[8]Authorized by the Chief of Engineers and terminated in April 1980 as a Circuit Court ruled sand mining to be illegal. In addition, $177,300 in Contributed Funds.

[9]Authorized by the Chief of Engineers. In addition, $485,371 in Contributed Funds.

[10]Authorized by the Chief of Engineers. In addition, $312,480 in Contributed Funds.

[11]Authorized by the Chief of Engineers. In addition, $101,547 in Contributed Funds.

[12]Authorized by the Chief of Engineers. In addition, $255,728 in Contributed Funds.

[13]Authorized for construction by Public Law 100Ð71. In addition, $1,226,486 in Contributed Funds.

[14]Authorized by the Chief of Engineers. In addition, $132,075 in Contributed Funds.

[15]In addition $82,000 in Advanced Funds and $17,640 in Contributed Funds.

[16]Authorized by the Chief of Engineers. In addition, $126,000 in Contributed Funds.

TABLE 31–E OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	Status	For Last Full Report See Annual Report for:	Cost to September 2005	
			Construction	Operations and Maintenance
Alenaio Stream, Hawaii, Hawaii	Completed	1997	10,226,000 [7]	---
Asan Village, Guam	Completed	1986	1,275,500	---
Hanapepe River, Kauai, Hawaii	Completed	1967	784,867 [1]	---
Iao Stream, Maui, Hawaii	Completed	1985	12,621,108	356,523
Kahawainui Stream, Oahu, Hawaii	Completed	1998	4,672,021 [2]	---
Kahoma Stream, Maui, Hawaii	Completed	1990	10,988,750 [3]	---
Kaneohe-Kailua Area, Oahu, Hawaii	Completed	1985	25,552,400 [4]	---
Kaunakakai Stream, Molokai, Hawaii	Completed	1950	73,478 [5]	---
Kawainui Marsh, Oahu, Hawaii	Completed	1987	3,714,000 [8]	---
Kawainui Swamp, Oahu, Hawaii	Completed	1967	1,265,567	---
Kuliouou Stream, Oahu, Hawaii	Completed	1971	1,000,000 [6]	---
Namo River, Guam	Completed	1982	2,416,314 [5]	---
Paauau Stream, Hawaii, Hawaii	Completed	1985	1,978,514	---
Wailoa Stream and Tributaries, Hawaii, Hawaii	Completed	1966	1,044,888	---

[1]In addition, $11,953 in Contributed Funds.
[2]Authorized by the Chief of Engineers. In addition, $679,205 in Contributed Funds.
[3]In addition, $645,992 in Contributed Funds.
[4]Includes Non-Federal reimbursement of recreation construction cost of $5,668,300. In addition, $8,175 in Contributed Funds.
[5]Authorized by the Chief of Engineers.
[6]Authorized by the Chief of Engineers. In addition, $540,335 in Contributed Funds.
[7]In addition, $4,483,300 in Contributed Funds.
[8]Authorized by the Chief of Engineers. In addition, $1,293,000 in Contributed Funds.

TABLE 31–F OTHER AUTHORIZED MULTIPLE PURPOSE PROJECTS, INCLUDING POWER

Project	Status	For Last Full Report See Annual Report for:	Cost to September 2005	
			Construction	Operations and Maintenance
Nanpil River Hydropower, Pohnpei, Federated States of Micronesia	Completed	1994	$ 8,000,000	$ ---

TABLE 31–G DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for:	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Agana River, Guam	1989	April 2002 PL 99-662	$ 250,000	$ ---
Ala Wai Harbor, Oahu, Hawaii	1976	November 1986 PL 99-662	40,117	---
Coconut Point, Nu'uuli, Tutuiula Island, American Samoa	---	April 2002 PL99-662	50,000	---
Hana Small Boat Harbor, Maui, Hawaii	1967	November 1977 HD #94-413	---	---
Hanalei Small Boat Harbor, Kauai, Hawaii	1967	November 1981 HD #97-59	---	---
Hanapepe Bay, Kauai, Hawaii	1965	November 1986 PL 99-662	---	---
Heeia–Kea Small Boat Harbor, Oahu, Hawaii	1972	January 1990 PL 99-662	1,481	---
Hilo Deep Draft Harbor, Hawaii, Hawaii	---	April 2002 PL 99-662	89,000	---
Kailua Small Boat Harbor, Oahu, Hawaii	1967	January 1990 PL 99-662	---	---
Kaimu Black Sand Beach, Hawaii, Hawaii	1975	July 1981 Director of Civil Works	86,235	---
Kapaakea Homestead Flood Control, Molokai, Hawaii	1979	July 1981 Director of Civil Works	221,500	---
Kaunakakai Deep Draft Harbor, Molokai, Hawaii	1966	January 1990 PL 99-662	133,188	292,441
Kaunakakai Small Draft Harbor, Molokai, Hawaii	---	January 1990 PL 99-662	---	---
Kewalo Harbor, Oahu, Hawaii	1976	September 1975 Director of Civil Works	98,800	---
Lahaina Small Boat Harbor, Maui, Hawaii	1977	January 1990 PL 99-662	186,937	---
Maunalua Bay Small Boat Harbor, Oahu, Hawaii	1972	January 1990 PL 99-662	30,378	---

TABLE 31–G (Contd.) DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for:	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Nawiliwili Deep Draft Harbor, Kauai, Hawaii	---	January 1990 PL 99-662	---	---
Rainmaker Hotel, American Samoa	---	November 1991 PL 99-662	---	---
Reeds Bay Small Boat Harbor, Hawaii, Hawaii	1967	January 1990 PL 99-662	---	---
Saipan Harbor, Northern Marianas	---	November 1991 PL 99-662	---	---
Talofofo Bay Shore Protection, Guam	---	August 1981 Director of Civil Works	80,764	---
Waimea Beach, Kauai, Hawaii	---	November 1986 PL 99-662	---	---
Wake Island Harbor, Wake Island	1950	November 1986 PL 99-662	---	---

TABLE 31–H INSPECTION OF COMPLETED NAVIGATION PROJECTS

Location	Dates of Inspection
Navigation Projects	
Agana Small Boat Harbor, Guam	April 2005
Agat Small Boat Harbor, Guam	April 2005
Auasi Small Boat Harbor, American Samoa	March 2005
Aunuu Small Boat Harbor, American Samoa	March 2005
Barbers Point Harbor, Oahu, Hawaii	May 2005
Haleiwa Small Boat Harbor, Oahu, Hawaii	September 2005
Hilo Harbor, Hawaii, Hawaii	May 2005
Honokohau Small Boat Harbor, Hawaii, Hawaii	May 2005
Kahului Deep Draft Harbor, Maui, Hawaii	June 2005
Kawaihae Deep Draft Harbor, Hawaii, Hawaii	May 2005
Kawaihae Small Boat Harbor, Hawaii, Hawaii	May 2005
Laupahoehoe Harbor, Hawaii, Hawaii	May 2005
Manele Small Boat Harbor, Lanai, Hawaii	June 2005
Nawiliwili Deep Draft Harbor, Kauai, Hawaii	July 2005
Nawiliwili Small Boat, Kauai, Hawaii	May 2005
Pohoiki Launch Ramp Facility, Hawaii, Hawaii	May 2005

TABLE 31–H (Contd.) INSPECTION OF COMPLETED NAVIGATION PROJECTS

Location	Dates of Inspection
Port Allen Harbor, Kauai, Hawaii	May 2005
Tau Small Boat Harbor, American Samoa	March 2005

TABLE 31–I INSPECTION OF COMPLETED FLOOD CONTROL AND BEACH EROSION CONTROL PROJECTS

Location	Dates of Inspection
Flood Control Projects	
Alenaio Stream, Hawaii, Hawaii	December 2004
Asan Village, Guam	February 2005
Hanapepe River, Kauai, Hawaii	October 2004
Iao Stream, Maui, Hawaii	January 2005
Kahawainui Stream, Oahu, Hawaii	November 2004
Kahoma Stream, Maui, Hawaii	January 2005
Kaneohe-Kailua Dam, Oahu, Hawaii	November 2004
Kaunakakai Stream, Molokai, Hawaii	January 2005
Kawainui Marsh, Oahu, Hawaii	November 2004
Kuliouou Stream, Oahu, Hawaii	November 2004
Namo River, Guam	February 2005
Paauau Stream, Hawaii, Hawaii	December 2004
Wailoa Stream, Hawaii, Hawaii	December 2004
Waimea River, Kauai, Hawaii	October 2004
Beach Erosion Control Projects	
Afono Area, American Samoa	March 2005
Alii Drive, Hawaii, Hawaii	December 2004
Aoa Area, American Samoa	March 2005
Asquiroga Bay, Guam	February 2005
Haleiwa Beach Park, Oahu, Hawaii	September 2005
Kaaawa Beach Park, Oahu, Hawaii	November 2004
Kahului Bay, Maui, Hawaii	June 2005
Kahului Wastewater Facility Shoreline, Maui, Hawaii	June 2005
Kapaa Beach, Kauai, Hawaii	October 2004
Kekaha Beach, Kauai, Hawaii	May 2005
Kihei Beach, Maui, Hawaii	January 2005
Lepua Area, American Samoa	March 2005
Masefau Bay, American Samoa	March 2005
Matafao Shoreline, American Samoa	March 2005
Ofu Airstrip, American Samoa	March 2005
Pago Pago Airport, American Samoa	March 2005
Pago to Nuuuli, American Samoa	March 2005
Poloa Area, American Samoa	March 2005
Saipan Beach Road, CNMI	February 2005
Sand Island, Oahu, Hawaii	September 2005
Sand Island State Park, Oahu, Hawaii	September 2005
Vatia Area, American Samoa	March 2005

TABLE 31–J NAVIGATION ACTIVITIES PURSUANT TO SECTION 107, PUBLIC LAW 86-645, AS AMENDED (PREAUTHORIZATION)

Study	Fiscal Year Costs
Apra Small Boat Harbor, Guam	2,077
Aunuu Small Boat Harbor, American Samoa	309
North Kohala Navigation Improvement, Hawaii, Hawaii	8,382
Outer Cove Marina, CNMI	10,630
Western District Small Boat Harbor, American Samoa	196
Coordination Account	1,310
TOTAL	$22,904

TABLE 31–K EMERGENCY STREAMBANK AND SHORELINE PROTECTION ACTIVITIES PURSUANT TO SECTION 14, PUBLIC LAW 79–526, AS AMENDED (PREAUTHORIZATION)

Study	Fiscal Year Costs
Hauula Highway, Oahu, Hawaii	851
Kaaawa Highway, Oahu, Hawaii	1,649
Punaluu Highway, Oahu, Hawaii	1,276
Coordination Account	303
TOTAL	$4,079

TABLE 31–L BEACH EROSION CONTROL ACTIVITIES PURSUANT TO SECTION 103 PUBLIC LAW 87-874, AS AMENDED (PREAUTHORIZATION)

Study	Fiscal Year Costs
Commercial Port Road, CNMI	$30,823
F-1 Fuel Pier, Guam	10,630
Leloaloa, American Samoa	32,648
Pago Pago Airport, American Samoa	520
Coordination Account	1,738
TOTAL	$76,359

TABLE 31–M FLOOD CONTROL ACTIVITIES PURSUANT TO SECTION 205, PUBLIC LAW 80–858, AS AMENDED (PREAUTHORIZATION)

Study	Fiscal Year Costs
Fagaalu Stream, American Samoa	$3,994
Kapaakea Stream, Molokai, Hawaii	4,832
Keopu-Hienaloli Stream, Hawaii, Hawaii	283,575
Kuliouou Stream, Oahu, Hawaii	5,311
Moanalua Stream, Oahu, Hawaii	17,770
Pago Pago Watershed, American Samoa	1,621
Palai Stream, Hawaii, Hawaii	143,901
Waiakea Stream, Hawaii, Hawaii	32,657
Wailele Stream, Oahu, Hawaii	15,054
Coordination Account	868
TOTAL	$509,583

TABLE 31–N MODIFICATIONS FOR IMPROVEMENTS OF ENVIRONMENT PURSUANT TO SECTION 1135 PUBLIC LAW 99–662, AS AMENDED (PREAUTHORIZATION)

Study	Fiscal Year Costs
Kanaha Pond, Maui, Hawaii	$87,517
Kawainui Marsh, Oahu, Hawaii	118,149
Kaunakakai Stream, Molokai, Hawaii	14,036
Pelekane Bay, Hawaii, Hawaii	17,674
Preliminary Restoration Plans	2,007
Coordination Account	303
TOTAL	$239,686

ALASKA DISTRICT

This District consists of the State of Alaska.

IMPROVEMENTS

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Navigation

Flood Control

General Investigations

Tables

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Navigation

1. ANCHORAGE HARBOR, AK

Location. Anchorage is in south-central Alaska on the southeast shore of Knik Arm, north of Turnagain Arm near its junction with Cook Inlet. (See NOAA Charts 16660 and 16664.)

Existing project. Authorized by the Rivers and Harbors Act, 3 July 1958, as amended, provides for a deep water harbor by dredging to a depth of –35 MLLW. The existing project accommodates three dry cargo berths and two petroleum handling facilities. It is the main supply and distribution center for the south-central and interior areas and the two large military bases that lie within the Municipality of Anchorage. The Port of Anchorage is the largest cargo port in Alaska and was designated the nation's 13th strategic port in August of 2004. The tidal range between mean lower low water and mean higher high water is 29 feet with an extreme range of 41 feet.

Local cooperation. Fully complied with.

Accomplishments during fiscal year. Maintenance dredging was performed under the optional second year of a 2-year RFP contract with Manson Construction. Dredging was conducted from June thru October with a total of 1,832,610 cubic yards removed from the project thru September 30th and 1,792,515 cubic yards removed for the season ending 1 November 2005.

2. COOK INLET NAVIGATION, AK

Location. Southern flank of Knik Arm Shoal about 6 miles southwest of Anchorage, AK.

Existing project. Authorized by the 1996 Water Resources Development Act and amended in Public Law 105-245; provides for a 3,330 m long by 310 m wide by –11.5 m MLLW deep shipping channel into Knik Arm. Cook Inlet Navigation Channel provides all-tide access to the Port of Anchorage. The PCA was executed on 9 Jan 98. Construction contract was awarded on 2 Dec 98 and was completed in September 2000 for a combined Federal and Contributed Cost of $10,507,100. A total of 1,459,543 cubic yards were removed in the two seasons of dredging by Manson Construction. The sponsor reimbursed the CORPS 10% of the project and the project is now fiscally complete.

Local cooperation. Fully complied with.

Terminal facilities. This project reduces delays for the container ships that supply cargo for 80 percent of the Alaskan people.

Accomplishments during fiscal year. A hydrographic survey was completed to ensure navigational safety exists throughout the channel area. Reauthorization for deepening and lengthening the project and continuation of modeling studies was included in the FY05 Omnibus Bill (PL 108-447).

3. CHIGNIK HARBOR, AK

Location. The city of Chignik is located on the south side of the Alaska Peninsula about 450 miles southwest of Anchorage.

Existing project. The city of Chignik is situated on the south shore of Alaska Peninsula in Southwestern Alaska. It is an active and growing island port whose economy is heavily dependent on commercial fishing. The local fleet presently anchors in the ice free, but inadequately protected harbor or ties up at the exposed city dock. At present boats are subject to overcrowding and hazardous mooring conditions between fishing periods. The anchorage is exposed to all storms from the southeast clockwise to the northwest. The violent southeast and northwest storms often damage and sometimes destroy boats by forcing them ashore or on the exposed rock reefs at low tides.

Local cooperation. Fully complied with.

Terminal facilities. The authorized project will provide a protected harbor, which will produce benefits in the form of reduced boat damage, increased fish harvest, and a harbor of refuge. The average annual navigation benefits attributable to the project are currently estimated at $1,695,400. A construction contract was awarded on 20 August 2001 with West Construction for $6,549,270.

Accomplishments during fiscal year. Construction completed with a modification executed to delete most of the dredging work because of a differing site conditions claim.

4. DILLINGHAM HARBOR, AK

Location. Dillingham Harbor is located at the head of Nushagak Bay, an arm of Bristol Bay, on the right bank of Nushagak River, just below its confluence with Wood River; about 470 miles northeast of Dutch Harbor and 300 miles southwest of Anchorage. (See NOAA/NOS Chart #16660.)

Existing project. The Rivers and Harbors Act of 1958 provides for a 650 to 800 foot wide X 700 foot long basin utilizing a 1100 foot long entrance channel to Nushagak Bay,

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the harbor provides half-tide access and all-tide moorage for over 320 commercial fishing vessels. The harbor is also used as an alternate landing area for lighterage vessels. Tidal range between mean lower low water and mean higher high water is 19.8 feet. Extreme range is 30 feet.

Local cooperation. Fully complied with.

Terminal facilities. There are four docks at the city of Dillingham; three privately owned, one owned by the city. Four publicly owned small boat floats located in the Harbor basin were installed in June 1982. They are removed before fall freezeup and replaced each spring.

Accomplishments during fiscal year. Annual maintenance dredging was carried out by Nehalem River Dredging in June with the removal of 90,000 cubic yards using the optional 3rd year of a 3-year IFB contract.

5. FALSE PASS, AK

Location. False Pass is a small community located on the east side of Unimak Island, which is the east end of the Aleutian Island chain in Southwest Alaska. False Pass is approximately 700 air miles from Anchorage.

Existing project . The feasibility study was initiated in 1999 and the project authorized in the Water and Resources Development Act of 2000 to accommodate a fleet of 88 vessels in a 5.2-acre basin protected by two rubble-mound breakwaters, 1,300 feet and 600 feet in length. The project requires dredging of the inner basin and the entrance channel. The PCA was executed on 4 May 2004 and the design competed on 25 April 2005 .

Local cooperation. Fully complied with.

Accomplishments during fiscal year. A contract was awarded 11 July 2005 to Kelly Ryan for $19,729,300 with work beginning in the summer of 2006.

6. HOMER HARBOR, AK

Location. In Kachemak Bay, on the Kenai Peninsula, 152 miles by water, southwest of Anchorage. The harbor site is near the extremity of Homer Spit, a narrow extension of land protruding southeasterly some 4.5 miles into the bay. (See NOAA/NOS Chart #16645.)

Existing Project. Authorized by the River and Harbors Acts of 1958 and 1964. The 50-acre project provides sheltered moorage for over 1,525 commercial fishing and recreational vessels. The project extends the fishing season an extra four months each year and is an integral part of Homer's economy. Project depth varies from 10 feet mean lower low water in the west end of the harbor to 20 feet below mean lower low water in the entrance channel and the east end. The entrance channel is protected by a main rock breakwater 1,018 feet long and secondary rock breakwater 238 feet long. Tidal range between mean lower low and mean higher high water is 18.1 feet, with an extreme range of 30.4 feet.

Accomplishments during fiscal year. Annual maintenance dredging was carried out by Portable Hydraulic Dredging in September with the removal of approximately 8,500 cubic yards under the first year of a 2-year IFB contract.

7. KAKE HARBOR, AK

Location. Kake, a community of 700, is located in Southeastern Alaska about 40 miles west of Petersburg and 800 miles northwest of Seattle.

Existing project. Commercial fishing and logging are the primary industries in the area. A feasibility report was completed in 1968, and the recommended project was authorized for construction. A construction contract was awarded on 29 April 1998 to Kake Tribal Logging & Timber Corporation for $14,554,257. The breakwater was physically completed in October 2000 at a total cost of $15,825,588. The completed project includes a rubblemound breakwater at the Portage Cove site. The city of Kake is the local sponsor, with financial support from the State.

Local cooperation. A Project Cooperation Agreement was signed on 26 Nov 1997.

Accomplishments during fiscal year. None.

8. NINILCHIK HARBOR, AK

Location. Ninilchik Harbor is located at the mouth of Ninilchik River in Cook Inlet, at the village of Ninilchik. The community of Ninilchik, AK is about 40 miles upcoast from Homer and 112 miles southwest of Anchorage. (See NOAA/NOS Chart #16640.)

Existing project. This project is authorized by the Rivers and Harbors Act of 1958 for a basin 400 feet long by 150 feet wide and dredged to an elevation of 2 feet above mean lower low water. Also included was an approach channel 400 feet long and 50 feet wide dredged to an elevation of 9 feet above

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mean lower low water and protected by two rock jetties. The basin offers protected moorage with half-tide access for 32 vessels. The basin and channel also provide access for fishing boats to unload their catch and take on supplies. It is also an important harbor of refuge in the lower Cook Inlet region. Beach protection was accomplished in 1967 and 1969. The tide range between mean lower low water and mean higher high water is 19.1 feet, with an extreme range of 29.3 feet.

Local cooperation. Fully complied with.

Accomplishments during fiscal year. Annual maintenance dredging was carried out by Portable Hydraulic Dredging in May with the removal of 5,303 cubic yards under the base year of a 2-year IFB contract.

9. NOME HARBOR, AK

Location. Nome Harbor is located at the mouth of the Snake River at the city of Nome, AK, on the northerly shore of Norton Sound, an arm of the Bering Sea. It is a shallow open roadstead, 581 nautical miles north of Dutch Harbor and 545 air miles northwest of Anchorage. (See NOAA/NOS Chart #16206.)

Existing project. Authorized by the Rivers and Harbors Acts of 1917, 1935, and 1948. The original Federal navigation project, was constructed at 8 ft MLLW and consisted of a dogleg entrance channel 75 feet wide by 1550 feet long running from Norton Sound to a turning basin 250 feet wide by 600 feet long, located at the confluence of the Snake River with Dry and Bourbon Creeks. The entrance was flanked seaward by a 400 foot eastern jetty and a 240 foot western jetty and protected through its length by a wood sheet pile revetment on both sides. In the early 50s, the wood was refaced with steel sheet pile. Modifications to the existing harbor were authorized in the Water Resources Development Act of 1999 based on the Chief of Engineers report dated 8 June 1999 and amended on 2 August 1999. A PCA was executed 28 May 2002 and on 30 September 2003 a $35,878,300 contract was awarded to the Kiewitt-Manson JV for improvements consisting of a 3,025 foot attached rubblemound breakwater located east of the existing causeway and a 270 foot rubblemound spur extending out from the end of the causeway. Improvements also included a new navigation channel to be constructed through the spit between the causeway and the breakwater structures along with a sediment trap and bypass system to prevent the tip shoal at the end of the causeway from becoming larger. The existing causeway two-lane bridge is to be replaced and lengthened with a simple span 130 foot steel bridge. The original project entrance channel is to be filled and the jetties removed. The eastern waterfront is protected by a 3350-foot long seawall that extends from the eastern jetty. Range between mean lower low water and mean higher high water is 1.6 feet and extreme tidal range is 7.5 feet, but water levels are influenced more by wind than tide. Levels of 5 feet below mean lower low water have been observed during offshore winds, and a level of 14 feet above mean lower low water has been observed during a southerly storm.

Local cooperation. Fully complied with.

Terminal facilities. Cargo and passengers from ocean vessels are lightered to and from shore, a distance of about 2 miles. Traffic enters the dredged channel and is handled over revetment, where a lighterage company has transfer facilities that are open to the public. Facilities are considered inadequate for existing commerce. In July 1984, the city of Nome received Department of Army authorization (permit) to construct a 3,600-foot gravel filled causeway. Construction of the causeway began in July 1985. Due to lack of funding, the length of the causeway was shortened to 2,700 feet. Construction was completed in May 1987. Use of this causeway for off-loading petroleum products was delayed until the September 1987 arrival of a required berthing barge.

Accomplishments during fiscal year. Kiewit-Manson JV completed the spur breakwater, the main breakwater, all the dredging, the bridge, and filled the old entrance channel. A September storm caused major damage to the new breakwater. Investigations show the breakwater was improperly constructed and will be reconstructed and the remaining project completed in FY 2006.
Annual maintenance dredging was carried out in the outer portion of the entrance channel in June with the removal of 6,500 cubic yards by Portable Hydraulic Dredging of Portland, Oregon under the optional 4th year of a 4-year IFB contract.

10. ST. PAUL HARBOR, AK

Location. St. Paul Island Harbor is located on the shore of Village Cove, the southern side of St. Paul Island, the largest and most populated island of the Pribilof group in the central southeast Bering Sea .

Existing project. Congress authorized improvements to the breakwater, the entrance channel, and the maneuvering area in WRDA of 1996. The construction contract for Phase I to build the three underwater reefs was awarded 19 March 1999 for $10,411,000 and completed in August 2001. A severe scour at the toe of the main breakwater was identified in the spring of 2001. The Phase I contract was modified to repair the scour,

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but the contractor was able to complete a small portion of the repair at a cost of approximately $8 million. The Phase II construction contract for dredging the harbor and completion of the scour repair was awarded to Kelly Ryan Construction on 27-June-2003 for $26,279,960

Local Cooperation. A Project Cooperation Agreement was executed on November 24, 1998.

Accomplishments during fiscal year. Construction was completed September 2005. A small boat harbor was authorized in WRDA 99 and will be in a Phase III construction contract.

11. SAND POINT, AK

Location. Sand Point is a commercial fishing community on the Pacific coast off the southwestern Alaska Peninsula. Sand Point is about 570 air miles southwest of Anchorage and about midway between Kodiak and Dutch Harbor. The harbor provides close access to one of the State's most productive fishing areas. For the past few years, the population has been stable at around 1,000. The economy is based wholly on commercial fishing.

The harbor currently provides no permanent protected moorage for vessels larger than 80 feet. In recent years, the fleet operating in the Bering Sea/Aleutian Island area, made up primarily of vessels ranging from 80 to 160 feet, has grown significantly. Skippers fishing in the Sand Point area currently travel long distances to secure protected moorage.

Existing project. Project was authorized in WRDA 1999. The authorized harbor improvements at Sand Point consist of construction of a 570-foot and 370-foot breakwater from shore to form the basin and entrance channel of the new harbor. The crest height of the rubblemound breakwaters are to be +16 ft MLLW. The breakwaters are designed to withstand the forces of a 6.6 foot wave. The entrance channel is to be dredged to –18 ft MLLW, and 120 feet wide to allow one-way traffic of vessels 150 feet in length with a 34-foot beam and 10.5 foot draft. The mooring basin is to be dredged to a depth of –17 ft MLLW and would provide room for 37 vessels.

Local cooperation. PCA was executed 17 Nov 2004.

Accomplishments during the fiscal year. A construction contract was awarded to Western Marine Construction for $10,905,240 to perform the work and is scheduled for completion in September 2006.

12. SEWARD HARBOR, AK

Location. Seward, located on the Kenai Peninsula is about 125 miles south of Anchorage, Alaska by road. The town is located at the northern end of Resurrection Bay off the Gulf of Alaska and can be reached by air, sea, rail, and road. It lies at about 60 degrees 6 minutes N Latitude and 149 degrees 2 minutes W longitude.

Existing Project. The current harbor is filled to capacity with a waiting list of more than 330 boats. Expansion of the harbor was authorized in WRDA of 1999. The project will expand the existing harbor eastward and accommodate 339 additional vessels and cost $11,930,000.

Local cooperation. PCA was executed 13 Jun 2003.

Accomplishments during the fiscal year. The construction contract was awarded 3-Feb-2004 and is scheduled for completion in 2006.

13. SITKA HARBOR, AK

Location. The city of Sitka is located in southeastern Alaska, about 95 miles south-west of Juneau. It is situated on the western coast of 1,600 square mile Baranof Island. Sitka is about 20 miles from the open Pacific Ocean on the east side of Sitka Sound

Existing project. The project consists of three rubblemound breakwaters constructed across the northern end of the western anchorage, and inner harbor facility placed adjacent to Thomsen Harbor. This project created a large protected harbor in which moorage basins could be developed using minimal or no wave protection structures. The three breakwaters are 480 feet, 1,200 feet, and 320 feet long. Navigation openings in the breakwater 325 feet and 190 feet wide at the design depth, are located at natural channels where water depths are 50 to 55 feet at mean lower low water. Two gaps allow for vessel traffic separation, which may be particularly important when log rafts or barges are being towed through the western anchorage. The two breakwaters forming the southern opening overlap to minimize ocean swell in Thomsen Harbor. The breakwaters are placed directly on the submerged rock reefs forming the northern boundary of western anchorage. The Channel Rock Breakwaters were physically completed in 1995. During construction 192,318 cubic yards of core rock, 65,330 cubic yards of secondary rock, 52,867 cubic yards of armor stone were placed. Construction was completed in June 1996. A study of the breakwater effect on the herring population was completed in 1998 and showed no ill effects on the fish population

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Local cooperation. The Project Cooperation Agreement was executed 7 December 1993.

Accomplishments during the fiscal year. .A project deficiency report was initiated and physical modeling was completed. A second year of wave modeling was initated.

14. WRANGELL HARBOR, AK

Location. Wrangell Harbor is located on the northwest side of Wrangell Island, 824 miles from Seattle and 160 miles from Juneau. (See U.S. Coast and Geodetic Survey Charts Nos. 8164, 8161, and 8201.)

Existing project. The project consists of a rubblemound breakwater 300 feet long to protect the southern portion of the outer harbor; a mooring basin 600 feet long, 400 feet wide, and 10 feet deep below mean lower low water within the protected area; an inner basin in the tide flat area east of Shakes Island, 325 feet wide and 550 feet long; a connecting channel 120 feet wide and approximately 530 feet long; a connecting channel 120 feet wide and approximately 530 feet long from the outer mooring basin all at a depth of 10 feet at mean lower low water; and construction of a rock mound breakwater 320 feet long on the reef north of Shakes Island. The range between mean lower low water and mean higher high water is 15.7 feet. The extreme tidal range is 26 feet. Heavy swells, dangerous to small fishing boats, are caused by the wind, which causes an additional rise of about one foot.

Construction of the breakwater north of Shakes Island was placed on inactive status as material to be used from the inner basin was unsuitable and the breakwater considered unnecessary for safe moorage of vessels. The cost of this portion was last revised in 1956 and estimated to be $6,500. (See table 40-B for authorizing legislation.)

The Heritage Harbor was authorized to be built in the Cemetery Point site in WRDA 99 following the feasibility study that was initiated in FY 1997. This project will consist of two breakwaters and dredging an entrance channel and inner harbor area. The PCA was executed on 7-March-2003 and the construction contract awarded to Kiewit Pacific Company on 11-July-2003 for $13,841,550.

Local cooperation. The Project Cooperation Agreement was executed on 7 Mar 2003.

Terminal facilities. There are eight wharves and floats in Wrangell Harbor. Two privately owned wharves serving general cargo and passenger terminals, one of which includes a cold storage facility, are open for public use. The remaining wharves serve various industrial purposes. One of the floats is publicly owned and is open for public use for mooring and servicing of small craft, and two privately owned floats serve oil-handling facilities.

Accomplishments during fiscal year. The construction of Heritage Harbor was completed in 2005. A modification to the contract was made to add $64,772 of O&M funds to dredge a high spot in the old original harbor with the dredged material disposed of in the new parking lot adjacent to the new Heritage Habor. The O&M work was completed in November of 2004. The overall contract has not been closed out due to a claim for differing site conditions in the new harbor area.

Flood Control

15. BETHEL BANK STABILIZATION, AK

Location. Bethel, AK is located in southwestern Alaska on the north bank of the Kuskokwim River 400 miles west of Anchorage.

Existing project. The project consists of rock riprap toe protection installed on the unprotected riverbank and at locations where existing city construction bulkheads are threatened by erosion. This includes 4,000 feet of unprotected riverbank and 4,200 feet of previously installed bulkheads. The construction contract was awarded on 26 May 1995. Emergency erosion protection for the Bethel Cargo Dock and completed in September 1997. The Mission Road Bulkhead began in July 1995 and continued through FY 1995 due to accelerated erosion that accumulated after spring runoff. A FY 2001 Congressional Add authorized and directed the Corps to extend the existing project an additional 1,200 feet upstream. A post authorization letter report was completed and approved in FY 2002. The total project cost was $24,000,000 of which Bethel contributed $6,000,000.

Location cooperation. A Project Cooperation Agreement was signed on 3 March 1994. An amendment was signed in December 2002 to extend the project 1200 feet upstream.

Terminal facilities. The POL tank farm is situated at the downstream end of the project and the city's general cargo dock is at the upstream end of the project.

Accomplishments during fiscal year. Real estate acquisition efforts continued on the new areas while the city requests a design change in Browns's Slough. A construction contract will be awarded as soon as the city completes real estate acquisition.

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16. CHENA RIVER LAKES, AK

Background. For details, see Annual Report for FY 2000.

Accomplishments during fiscal year. Despite the record setting wildfires that burned over major portions of the both the Chena and Little Chena River watersheds in 2004, there were no flood or high water events during 2005 that required operation of Moose Creek Dam. The Chena River's highest flow was recorded on 29 April at 5,300. cubic feet per second, well below the usual operating threshold of the dam. Above average precipitation over the spring and summer was well distributed and also did not produce enough runoff to operate the dam at any time during the rest of the flood season.

The Chena Project welcomed new damtender, Gary Chambers to the staff. Mr. Chambers has extensive experience operating Corps locks and dams in the Tulsa District. Under his guidance, operational exercises with the Project's crane were conducted prior to the flood season. He also began preparing the dam and its engineered features for the Project's next periodic inspection scheduled for summer, 2006. The Project's operations staff utilized the crane to remove and replace the 8,000 pound viewing window in the fish ladder. This window had sustained damage from possible earthquake-related movement in the fish ladder structure.

In July, a successful internal ERGO inspection was conducted by District and Project staff. A highlight of the year was a site visit by the Chief of Engineers, Major General Strock in August of 2005.
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17. DILLINGHAM EMERGENCY BANK STABILIZATION

Location. Dillingham is located 350 miles southwest of Anchorage, Alaska. The project is located along the southeastern edge of Dillingham adjacent to the Nushagak River. Erosion of the toe of the bluff in this area was endangering critical utilities and numerous buildings and homes. Erosion at the west entrance to the harbor is endangering the facilities and vessels.

Existing project. The authorized project consists of a 1,600-foot long steel sheet pile bulkhead along the toe of the bluff from the Dillingham City Cargo dock to Snag Point. An additional 600 feet of bulkhead with riprap revetment was constructed at the east side of the entrance to the harbor. The sheet pile wall was constructed to an elevation of 28 feet MLLW. Mitigation measures including emergency access ladders and eyebolts for anchoring set nets used for by subsistence fishermen are included in the project. Extension of the project to the west entrance to the harbor was directed in the FY 2001 Appropriation Conference Report.

Local cooperation. A Project Cooperation Agreement with the City of Dillingham Alaska was signed in January 1998 and will be amended to incorporate the project extension.

Terminal Facilities. Dillingham has a general cargo dock and a fuel facility adjacent to the authorized project.

Accomplishments during fiscal year. Designs for extending the sheetpile wall are being evaluated. A decision document is being developed to identify the scope and cost of the extension prior to preparing a PCA.

18. GALENA EMERGENCY BANK STABILIZATION

Location. Galena is located on the north bank of the Yukon River, 45 miles east of Nulato and 270 air miles west of Fairbanks.

Existing project. The project consists of a rock revetment along the Yukon River to protect the City of Galena from river erosion. In 1987, the Corps of Engineers constructed 1300 feet of riprap revetment protection along the river. The project is currently being out-flanked at the ends of the revetment by the river erosion. Approximately 1600 feet of additional revetment protection is required. Continued erosion and yearly ice breakups along the Yukon river are causing imminent danger to local facilities. Vital facilities, including barge facilities, utilities, and roads are in potential danger of being destroyed in the next year or two. Immediate action to protect these facilities is recommended because erosion is advancing at a accelerated pace in one area.

Local cooperation. The sponsor, the City of Galena supports the project. A post authorization letter report was completed and approved in FY-03. The PCA was executed 6 Aug 2003.

Accomplishments during fiscal year. A construction contract was awarded 23 June 2004 and completed in 2005.

19. KAKE DAM

Location. The city of Kake is located in southeast Alaska on the northwest shore of Kupreanof Island and has a population of approximately 700 residents, about 95 percent of which are Alaska natives. It is a Tlingit village with a fishing, logging, and subsistence lifestyle.

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Existing project. Project is to construct a replacement dam on Gunnuk Creek in Kake, AK to provide drinking water and hydroelectricity. The recommended plan calls for construction of a gravity concrete dam approx. 53 feet upstream from the previous dam, covering an area about 4,750 ft^2, and a spillway height of 23 feet.

Local cooperation. PCA was executed 3 September 2004. Construction, General funds will be reprogrammed within available funds into the project. A letter report is being prepared, which will include required formulation, economic, engineering, design, cost estimates, and environmental documentation. The hydroelectric segment will be evaluated and, if warranted, FERC licensing procedures initiated. Plans and specifications are being prepared. The project will be 100 percent federally funded with the Sponsor providing all of the necessary LERRD. The project will be turned over to the City of Kake for operation and maintenance after construction completion.

Accomplishments during fiscal year. A contract was awarded to Kiewit Pacific for $7,219,050 on 28 January 2005 with construction to be completed in FY 2006.

20 TRIBAL PARTNERSHIP PROGRAM

Location: Studies to define erosion problems and solutions are authorized for the following communities: Kaktovik, Shishmaref, Bethel, Dillingham, Unalakleet, Kivalina, and Newtok, Alaska. A Statewide Baseline Erosion Study is also authorized

Existing project: Project is to determine costs to protect the listed communities, relocate the communities, or co-locate them with another community, and to determine the remaining time that a community has until it is no longer functional due to erosion, perform approved general studies, and feasibility studies as approved by the ASA(CW).

Local cooperation: Each of the listed communities support this project and have assisted in obtaining local community input and local knowledge for the studies. The study efforts are at 100% Federal cost up to the authorized funds.

Accomplishments during the fiscal year: The initial analysis of the protection/relocation/collocation action has been completed, and the report will be published next year. Environmental studies are ongoing at Shishmaref, feasibility work has been initiated at Newtok and Kivalina, and community and agency input have been gathered for the Baseline Erosion Study.

21. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Emergency flood control activities--repair, flood fighting, and rescue work (Public Law 99, 84th Congress, and antecedent legislation).

Federal costs for the fiscal year were $1,903,573 for disaster preparedness, and field investigations.

22. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Inspections were made of the following flood control works: Bethel Bank Stabilization at Bethel; Deering Streambank Protection at Deering; Metlakatla Erosion Protection at Metlakatla; Homer Spit Revetments at Homer; Tanana River Levee at Fairbanks, Talkeetna River at Talkeetna; Lowell Creek at Seward; Klutina River at Copper Center; Skagway River at Skagway; Gold Creek at Juneau; and Emmonak Streambank Protection on the Yukon River at Emmonak. An inspection was made of the shore protection works at Nome.

GENERAL INVESTIGATION

23. SURVEYS

Fiscal year costs were $2,968,586 of which $1,619,077 was for navigation studies, $56,527 for flood damage prevention studies, $724,511 for shoreline protection studies, $135,208 for special studies, $0 for watershed comprehensive studies, $74,862 for miscellaneous studies, and $358,401 for coordination studies with other agencies. In addition contributed funds in the amount of $1,188,022 were expended for General Investigation's Feasibility Studies: $4,070 for Akutan, $33,610 for Port Lions, $202,127 for Valdez, $12,867 for Haines, $400,108 for Barrow, $403,726 for Unalaska, $27 for Unalakleet, $78,660 for DeLong Mountain, and $52,827 for PAS-Planning Assistance to States.

24. COLLECTION AND STUDY OF BASIC DATA

Technical assistance, information, flood plain management guidance, and other flood plain management services have been provided to military and nonmilitary Federal agencies, local communities, state agencies, Architectural Engineering firms, lending institutions, and private individuals at a fiscal year cost of $193,322.

Fiscal year costs for Hydrologic Studies were $7,866.

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25. PRECONSTRUCTION ENGINEERING AND DESIGN

Fiscal year costs were $319,583 of which $24,548 for Akutan, $227,677 for Haines Harbor, and $67,358 for Unalaska.

26. SPECIAL PROJECTS

Alaska Environmental – Coordination with multiple State and Federal agencies on design consideration has been provided to the City of Buckland on its water and sewer project. The design is scheduled for construction start in 2006. FY05 costs were $88,751.

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TABLE 32-A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 02	FY 03	FY 04	FY 05	Total to 30 Sep 05
1.	Anchorage Harbor, AK	New Work					
		Approp.					533,235
		Cost					533,235
		Maint.					
		Approp.	3,602,447	6,317,923	12,874,000	11,387,338	79,020,690
		Cost	3,401,411	5,768,401	13,950,612	108,12,216	78,398,962
	(Contrib. Funds)	New Work					
		Contrib.					638,000
		Cost					638,000
2.	Cook Inlet	New Work					
	Navigation, AK	Approp.	-443,466				8,716,744
		Cost	-443,216				8,716,744
		Maint.					
		Approp.		131,730	429,000	-4,878	555,852
		Cost		131,730	403,911	10,920	546,561
	(Contrib. Funds)	New Work					
		Approp.	45,915				3,389,973
		Cost	443,273				2,498,971
3.	Chignik Harbor, AK	New Work					
		Approp.	4,229,075	444,000	1,150,000	2,527,000	9,268,774
		Cost	4,001,240	-7,554	1,833,492	2,529,971	9,244,385
		Maint.					
		Approp.					
	(Contrib. Funds)	Cost					
		New Work					
		Approp.	895,000			300,000	1,387,660
		Cost.	527,294		416,804	333,395	1,368,751
4.	Dillingham Harbor, AK	New Work					
		Approp.					1,060,677
		Cost					1,060,677
		Maint.	996,741	601,714	694,000	717,089	15,021,568
		Approp.	809,148	759,947	695,936	717,838	15,021,568
	(Contrib. Funds)	Cost					
		Maint					1,777
		Approp.					1,777
		Cost.					
5.	False Pass Harbor, AK	New Work					
		Approp.		180,000	-35,000	792,000	1,307,000
		Cost	587	58,790	82,178	244,698	753,123
	(Contrib. Funds)	New Work					
		Approp.		-6,957			300,156
		Cost		-4,698			238,262

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TABLE 32-A (Continued) **COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY 02	FY-03	FY 04	FY 05	Total to 30 Sep 05
6.	Homer Harbor, AK	New Work					3,511,949
		Approp.					3,511,949
		Cost					
		Maint.	351,891	398,611	353,000	397,974	8,166,063
		Approp.	346,647	403,324	352,548	398,265	8,166,063
		Cost					
		Rehab.					9,746,167
		Contrib.					9,746,167
		Cost					
7.	Kake Harbor, AK	New Work					16,294,245
		Approp.	-338,115				16,294,245
		Cost	-338,115				
		Maint.					1,971,000
	(Contrib. Funds)	Approp.	384,000				1,971,000
		Cost					
8.	Ninilchik Harbor, AK	New Work					
		Approp.					838,275
		Cost					838,275
		Maint.					
		Approp.	193,329	228,461	223,000	230,337	6,857,299
		Cost	193,329	228,461	222,964	230,374	6,857,299
9.	Nome Harbor, AK	New Work					
		Approp.	105,000	385,000	18,670,416	16,268,000	38,062,886
		Cost	138,949	248,183	18,821,905	16,034,558	37,241,125
		Maint					
		Approp.	311,604	673,827	493,000	3,213,131	19,338,240
		Cost	311,604	669,948	370,415	775,226	16,900,335
	(Contributed Funds)	New Work					
		Approp.			1,771,398		3,071,179
		Costs			1,569,871		2,225,071
		Maint					
		Approp.					643,870
		Cost					643,870
10.	St. Paul Harbor, AK	New Work					
		Approp.	7,153,000	395,000	17,062,584	9,049,000	60,557,784
		Cost	7,179,794	500,404	17,098,398	8,291,483	59,211,336
		Maint.					
		Approp.		11,000	586,000	964	1,023,428
	(Contrib. Funds)	Cost			596,334	1631	1,023,429
		New Work					
		Approp.	1,400,000		1,400,000	654,000	5,048,988
		Cost.	2,598,129		1,401,538	654,000	5,048,988

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TABLE 32-A (Continued) **COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY 02	FY 03	FY 04	FY 05	Total to 30 Sep 05
11.	Sand Point	New Work					
		Approp.		308,000	73,000	2,553,000	2,934,000
		Cost		104,580	203,800	1,100,481	1,408,861
	(Contrib. Funds)	New Work					
		Approp.				1,499,000	1,499,000
		Cost					
12.	Seward Harbor	New Work					
		Approp.	1,000,000	4,000	2,373,000	4,915,000	9,842,151
		Cost	44,517	218,246	3,102,614	4,891,282	9,818,433
	(Contributed Funds)	New Work					
		Approp.		9,692		2,000,000	2,092,142
		Cost			56,697		269,205
						192,870	
13.	Sitka Harbor, AK	New Work					
		Approp.			63,000	889,000	9,167,900
		Cost			28,783	450,177	8,729,077
	(Contributed Funds)	Approp.	-344,985				1,240,519
		Cost					1,240,519
		Maint					
		Approp.					129,329
		Cost					129,329
14.	Wrangell Harbor, AK	New Work					
		Approp.	215,000	339,000	6,378,317	5,740,000	13,532,476
		Cost	158,060	340,000	6,371,342	5,585,838	13,378,314
		Maint.					
		Approp.		-1,077	75,000	-37	1,121,339
		Cost			10,191	64,772	1,121,339
	(Contrib. Funds)	New Work					
		Approp.		8,573	841,000	2,706,000	3,638,306
		Cost		-4,999	773,794	2,096,617	3,028,923
15.	Bethel Bank Stabilization	New Work					
		Approp.	163,000	-4,000	-50,000	200,000	20,143,854
		Cost	195,802	40,560	31,195	24,868	19,811,567
	(Contributed Funds)	New Work					
		Approp.					4,690,000
		Cost			1,768		4,278,536
16.	Chena River Lakes, AK	New Work					
		Approp.	2,000	0	55,000		213,787,018
		Cost	2,022	0	20,031	7,974	213,787,018
		Maint.					
		Approp.	1,594,150	1,742,314	1,332,000	1,949,386	34,154,897
		Cost	1,504,217	1,648,421	1,464,503	1,613,306	33,823,051
	(Contributed Funds)	Approp					2,194,300
		Costs					2,157,929
17.	Dillingham Emergency	New Work					
	Bank Stabilization	Approp.	565,000	331,000	240,000	529,000	6,697,515
		Cost	738,021	202,227	360,720	386,499	6,484,299
	(Contributed Funds)	New Work					
		Approp.					
		Cost					

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See Section In Text	Project	Funding	FY 02	FY 03	FY 04	FY 05	Total to 30 Sep 05
18.	Galena Emergency Bank Stabilization	New Work Approp.	0	2,983,000			5,977,000
		Cost	154,398	132,493	1,408,481	3,176,957	4,953,618
	(Contributed Funds)	New Work Approp.					
		Cost					
19.	Kake Dam, AK	New Work Approp.	650,915	631,000	140,000	5,400,000	7,450,915
		Cost	809,879	490,000	281,249	2,713,144	4,697,272
	(Contrib. Funds)	Maint. Approp					
		Cost					
20.	Tribal Partnership Program	New Work Approp.				2,000,000	2,000,000
		Cost				1,317,844	1,317,844
		Maint. Approp					
		Cost					

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Table 32-B AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
1.		**ANCHORAGE HARBOR, AK**	
	Jul. 3, 1958	Deep winter harbor, adjacent to docks, dredge to 35 feet below mean lower low water, protected by two jetties.[1]	H.Doc. 34, 85th Cong., 1st Sess.[2]
	Oct. 22, 1976	Extension of project limits.	P.L. 94-587
3.		**COOK INLET NAVIGATION, AK**	
	Oct. 12, 1996	Deepen the entrance channel to -30 feet. Enlarge and deepen the maneuvering basin to -29.0 feet with an area of 415 by 830 feet. Wave spending beach to +4 feet. Three offshore reefs each, 1,300 feet long, constructed to a depth of –12 feet. Wave energy channel 100 feet wide with bottom elevation of +2 feet.	Section 101(b)(2), Water Resources Development Act of 1996. Energy and Water Development Appropriations Act, 1999. P.L. 105-245.
3.		**CHIGNIK HARBOR, AK**	
	Oct. 12, 1996	Deepen the entrance channel to -30 feet. Enlarge and deepen the maneuvering basin to -29.0 feet with an area of 415 by 830 feet. Wave spending beach to +4 feet. Three offshore reefs each, 1,300 feet long, constructed to a depth of –12 feet. Wave energy channel 100 feet wide with bottom elevation of +2 feet.	P.L. 104-303, Water Resources Development Act of 1996. FY 1999 Congressional Add
4.		**DILLINGHAM HARBOR, AK**	
	Jul. 3, 1958	Basin 230,000 square feet in area with depth of 2 feet above MLLW along Scandinavian Creek, with entrance channel 1,100 feet long and 40 feet wide.	H. Doc. 390, 84th Cong., 2d Sess.[2]
5.			
	Oct. 31, 2000	**FALSE PASS HARBOR, AK** Dredging of the inner basin and the entrance channel to accommodate a fleet of 88 vessels in a 5.2 acre basin protected by two rubble-mound breakwaters, 1,300 feet and 600 feet in length.	House Report 106-1020, Section 101 (b)(1) (2), Water Resources Development Act of 2000, 106th Congress
6.		**HOMER HARBOR, AK**	
	Jul. 2, 1958	Basin 2.7 acres in area with depth of 12 feet below mean lower low water, and rock breakwater 1,260 feet long.	H.Doc. 34, 85th Cong., 1st Sess.[2]
	Aug. 19, 1964	Relocation and rehabilitation of project destroyed by March 27, 1964 earthquake, by construction of basin 10 acres in area with 12-foot depth over 2.75 acres and 15-foot depth over 7.25 acres protected by rock breakwaters, 1,018 feet and 238 feet long.	P.L. 88-451
	Jul. 14, 1960	Increased width and depth of entrance channel and an enlarged staging area. Basin enlarged from 16.5 to 50 acres.	Section 107, P.L. 86-645 Authorized by Chief of Engineers, Nov. 13, 1981
7.	Aug. 13, 1968	**KAKE HARBOR, AK** Provides for a 1,580 foot long west breakwater and a 900 foot long south breakwater enclosing a 7 acre berthing area at -15 feet MLLW.	S. Doc. 249, 75th Cong., 1st Sess.
8.	Jul. 3, 1958	**NINILCHIK HARBOR, AK** Basin 320 feet long by 150 feet wide with depth of 2 feet above mean lower low water, approach channel 400 feet long and 50 feet wide with depth of 9 feet above mean lower low water, protected by 410 foot jetty.	H.Doc. 34, 85th Cong., 1st Sess.[2]

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Table 32-B (Continued) **AUTHORIZING LEGISLATION**

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
9.	Aug. 8, 1917	**NOME HARBOR, AK**	H.Doc. 1932, 64th Cong., 1st Sess.[2]
	Aug. 30, 1935	Two jetties, easterly 335 feet and westerly 460 feet long re-vetment, channel and basin 200 feet wide and 250 feet long. Extension of the jetties and enlarging basin to 250 feet wide and 600 feet long.[3]	H.Doc. 404, 71st Cong., 2d Sess., and Rivers and Harbors Committee Doc. 38, 73d Cong., 2d Sess.
	Jun. 16, 1948	Seawall	Reports of Chief of Engineers dated March 8, 1948
	Aug 17, 1999	New entrance to Nome Harbor; 3,025 feet-long breakwater; 270 feet-long causeway spur; 3,450 feet-long entrance channel with depth to 22 feet; sediment traps and causeway bridge.	Report of Chief of Engineers as amended, dated August 2, 1999. Section 101 (a) (3), P.L. 106-53 Water Resource Development Act of 1999, 106th Cong.
10.	Nov. 17, 1986	**ST. PAUL HARBOR, AK**	
		Add 1,050 feet of breakwater at existing crest height, 37 below feet mean lower low water and 1,000 feet long with a crest height of 18 above mean lower low water.	Section 202, P.L. 99-662
	Oct. 12, 1996	Deepen the entrance channel to -30 feet. Enlarge and deepen the maneuvering basin to -29.0 feet with an area of 415 by 830 feet. Wave spending beach to +4 feet. Three offshore reefs each, 1,300 feet long, constructed to a depth of –12 feet. Wave energy channel 100 feet wide with bottom elevation of +2 feet.	Section 101(b)(3), P.L. 104-303 Water Resources Development Act of 1996.
	Aug 17, 1999	Added small boat harbor with entrance channel and maneuvering area to –20MLLW and appropriate wave protection features.	Section 302, P.L. 106-53 Water Resource Development Act of 1999, 106th Cong.
11.	Aug 17, 1999	**SAND POINT HARBOR, AK** Construct a mooring basin adjacent and south of the existing harbor. It incorporates the southern breakwater and causeway to the city dock by extending the existing breakwater.	Section 101 (a) (3), P.L. 106-53 Water Resource Development Act of 1999, 106th Cong.
12.	Aug 17, 1999	**SEWARD HARBOR, AK** Provide more moorage space. Project would accommodate 339 additional vessels.	Section 101 (a) (3), P.L. 106-53Water Resource Development Act of 1999, 106th Cong.
13.	Oct 31, 1992	**SITKA HARBOR, AK** Boat harbor consisting of 3 rubblemound breakwaters.	Water Resources Development Act of 1992, H. Doc. 103-37, 103rd Cong., 1st Sess.
14.	Sep. 22, 1922	**WRANGELL HARBOR, AK** Breakwater 300 feet long to protect southern portion of harbor. Mooring basin 600 feet long, 400 feet wide, and 10 feet deep. Inner basin and connecting channel from the existing mooring basin, both 10 feet deep at mean lower low water, and breakwater 320 feet long on the reef north of Snakes Island. Project for navigation, Heritage Harbor, AK	H.Doc. 161, 67th Cong., 2d Sess.
	Aug. 30, 1935 Mar. 2, 1945		H.Doc. 202, 72nd Cong., 1st Sess. H.Doc. 284, 76th Cong., 1st Sess.
	Aug 17, 1999		Section 101 (a) (3), P.L. 106-53 Water Resource Development Act of 1999, 106th Cong.

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Table 32-B (Continued) **AUTHORIZING LEGISLATION**

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
15.	Nov. 17, 1986	**BETHEL BANK STABILIZATION, AK** Streambank protection by placing riprap along 8,500 feet of river-bank and replacing tiebacks of existing pipe pile wall.	Section 202, P.L. 99-662 .
16.	Aug. 13, 1968	**CHENA RIVER LAKES, AK** Provides for construction of a dam and floodway for the Chena River (17 miles east of Fairbanks) for a dam and reservoir on the Little Chena River, and for a 27 mile long levee system with interior drainage works on the north side of the Tanana River.	H. Doc. 148, 90th Cong., 2nd Sess. P.L. 90-483
17.	Dec. 19, 1985	**DILLINGHAM EMERGENCY BANK STABILIZATION, AK** Install 1,600 feet of steel sheetpile bulkhead along the toe of the bluff from the Dillingham city cargo dock to Snag Point. Extension of the sheet pile wall on the west end of the entrance channel to the small boat harbor and replacement of the existing wooden bulkhead at the city dock.	Sec. 116 P.L. 99-190 Section 1(a)(2) P.L. 106-377 Conference Report 106-988
18.	Dec. 19, 1985	**GALENA EMERGENCY BANK STABILIZATION, AK** The project protects approximately 1,800 LF by placing 28,000 cu. Yd. of armor rock, 288,000 sq. ft. filter fabric and 9,300 cu. yd. filter stone. A 3 ft thick layer of rip rap will extend from the top of the bank about elevation 123 ft. to elevation 90 ft.	Sec 116 P.L. 99-190
19.	Oct. 27, 2000	**KAKE DAM, AK** The project consists of a gravity concrete dam at Kake approximately 53 feet upstream from the previous dam, covering an area about 4,750 square feet, and a spillway height of 17.7 feet. It includes an intake structure, complete with fish screen and trash rack, and would house intake lines for the city and hatchery water supply.	EWDA FY2001 PL 106-377 Modified in EWDA FY2004
20.	Dec. 11, 2000 Dec. 01, 2004 Dec. 08, 2004	**TRIBAL PARTNERSHIP, AK** The project includes performing an analysis of the costs associated with continued erosion of Bethel, Dillingham, Shishmaref, Kaktovik, Kivalina, Unalakleet, and Newtok, defining potential costs associated with moving the affected communities to new locations (including collocation with existing communities), and identifying the expected time line for a complete failure of the useable land associated with each community. In addition expedited environmental studies to document the impacts of this severe and continuing erosion are required at Shishmaref. Additional work added this year includes a BaselineErosion Study, ongoing feasibility type studies at four communities, and general studies of Cultural Sites at Kaktovik and western Alaska wave climate definition	Section 203 WRDA FY2000 Section 112 EWDA FY2004 Section 117, Division C, Consolidated Appropriations Act 2005, (PL 108-447).

1. Purchase of dredge and deepwater jetties deauthorized November 6, 1977 under section 12, Public Law 93-251.
2. Contains latest published map.
3. Extension of jetties classified "inactive".
4. Little Chena Dam deauthorized in 1991.

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TABLE 32-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report for	Cost to Sep. 30, 2005 Construction	Cost to Sep. 30, 2005 Operation and Maintenance
Apoon Mouth of Yukon River, AK[1]	Completed	1920	128,896	2,981
Bar Point Harbor, AK[2]	Completed	1983	2,000,000[3]	
Bethel Small Boat Harbor, AK	Completed	1985	3,514,399	982,597
Cook Inlet Shoals, AK	Completed	1977	1,220,000	5,000
Cordova Harbor, AK[2]	Completed	1978	843,534	732,614
Cordova, AK	Completed	1986	9,642,000	
Craig Harbor, AK	Completed	1983	1,033,500[4]	462,880
Douglas Harbor, AK	Completed	1963	282,019	768,240
Dry Pass, AK	Completed	1983	943,351	141,787
Egegik River, AK	Completed	1972	4,441	10,018
Elfin Cove, AK	Completed	1959	154,191	17,323
Gastineau Channel, AK	Completed	1964	789,461	194,446
Haines Harbor, AK[2]	Completed	1977	1,000,000[5]	24,077
Homer Harbor, AK[2]	Completed	1987	13,232,845	8,166,063
Hoonah Harbor, AK	Completed	1983	5,418,716[6]	
Humboldt Harbor, AK	Completed	1977	3,679,683[7]	284,936
Iliuliuk Harbor, AK	Completed	1941	66,037	1,800
Juneau Harbor, AK	Completed	1974	1,381,150	429,023
Kake Harbor, AK	Completed	1991	870,700	
Kasilof Harbor, AK[2]	Completed	1975	109,848	
Ketchikan Harbor, AK	Completed	1979	1,602,417	331,256
Kodiak Harbor, AK	Completed	1973	1,891,212[8]	118,587
Mekorykuk, AK	Completed	1986	1,372,139	
Myers Chuck Harbor, AK	Inactive	1970	9,700	
Naknek River, AK	Completed	1961	20,789	265,557
Neva and Olga Straits, AK	Completed	1960	155,009	
Old Harbor, Kodiak Island, AK[2]	Completed	1972	370,415	425,312
Pelican Harbor, AK	Completed	1964	369,683	37,532
Petersburg Harbor, AK	Completed	1972	252,932	165,548
Port Alexander, AK	Completed	1949	17,000	594
Port Lions, AK[2]	Completed	1986	1,825,311	1,596,577
Rocky Pass, AK	Completed	1960	337,668	78,513
St. Michael Canal, AK	Completed	1916	377,062	560
Seldovia Harbor, AK	Completed	1974	1,051,883[9]	61,061
Sergius Whitestone, AK	Completed	1973	1,798,010	7,154
Seward Harbor, AK	Completed	1973	712,369[10]	544,689
Sitka Harbor, AK	Completed	1973	1,611,009	129,329
Skagway Harbor, AK	Completed	1972	133,180	108,190
Stikine River, AK	Completed	1987		241,250
Valdez Harbor, AK	Completed	1968	649,740[11]	322,807
Wrangell Narrows, AK	Completed	1979	3,562,343	9,338,507

1. Abandonment recommended in H.Doc. 467, 69th Cong., 1st Sess.
2. Authorized by Chief of Engineers (Sec. 107).
3. In addition, $272,779 of State funds.
4. Includes $656,240 for Sec. 107 project.
5. In addition, $925,500 of State funds.
6. In addition, $973,875 of State funds.
7. In addition, $857,000 of State funds.
8. Includes $594,163 for rehabilitation.
9. Includes $400,000 for rehabilitation.
10. Includes $90,026 for rehabilitation and $2,528 Code 710. Recreation facilities at Completed projects.
11. Includes $73,000 for rehabilitation and $2,713 Code 710. Recreation facilities at Completed projects.

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TABLE 32-E

OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	Status	For Last Full Report See Annual Report for	Construction	Cost to Sep. 30, 1994 Operation and Maintenance
Bethel Bank, Kuskokwim River[1]	Completed	1985	553,970	
Fairbanks, Tanana River & Chena Slough, AK	Completed	1943	557,000	
Gold Creek, AK	Completed	1975	876,006[2]	4,301
Klutina River, Copper Center, AK[3]	Completed	1973	260,681	
Lowell Creek, AK[4]	Completed	1945	416,382[5]	30,771
Salmon River, AK	Completed	1963	37,770[6 7]	162,925[8]
Talkeetna River, AK	Completed	1981	516,694	

1. Section 14.
2. In addition, $25,000 expended from contributed funds.
3. Authorized by Chief of Engineers (Sec. 205).
4. During FY88, $551,690 was expended from FC and CE.
5. In addition $25,000 expended from contributed funds.
6. Includes $34,197 of PWA funds.
7. In addition, $7,000 expended from contributed funds.
8. In addition, $27,400 expended from contributed funds.

TABLE 32-G

DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Federal Funds Expended	Contributed Funds Expended
Allison Lake, AK (Valdez Hydropower)		1992		
Anchorage Harbor, AK (Uncompleted Portion)	1967	1977		
Bradley Lake, AK 1983	1983	1982	46,701,000	
Ketchikan Harbor, AK (West Breakwater)	1979	1979		
Port Alexander, AK (Inner Harbor)	1949	1977		
Tolovana River, AK (Snagging)	1931	1977		
Little Chena River Dam	1983	1990		
Long Lake Dam	1975	1990		
Myers Chuck Harbor, AK	1970	1991	9,700	
Scammon Bay, AK		1992		
Skagway River, AK	1966	1991	26,385	

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TABLE 32-H

NAVIGATION WORK UNDER SPECIAL AUTHORIZATION NAVIGATION ACTIVITIES PURSUANT TO SECTION 107, PUBLIC LAW 86-645, AS AMENDED (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs
Coordination Account	25,594
Brown's Slough	0
Chenega Bay	0
Cherfornak Navigation Imp	23,921
Cold Bay Navigation Imp	43,188
Douglas Harbor	314,829
Elim Navigation Imp	19,940
Haines	0
Homer	0
Igiugig Navigation	15,234
King Cove	0
Kokanok Harbor	0
Manley Hot Springs	3,263
Metlakatla	0
Noatak	0
Ouzinkie	2,857
Port Graham, AK	33,613
Savoonga	16,437
St. Herman Harbor	0
Seward Marine Industrial	38,493
Small Navigation Improvement, Iliamna	11,730
Tatitlek	32
Teller Navigation	22,314
Whittier	0
Williamsport	11,657
Unalaska	0
TOTAL	583,101

TABLE 32-I

PROJECT CONDITION SURVEYS

Name of Project Date	Date Survey Conducted
Saint Paul Harbor	March 2005
Cook Inlet Navigation Channel	May and September 2005
Dry Pass	April 2005
Juneau, Aurora and Harris harbors	May 2005
Sergius Narrows	May 2005
Whitestone Narrows	May 2005
Sitka, Western Channel	May 2005
Sitka, Crescent Bay harbor	May 2005
Sitka, Channel Rock Breakwaters	May 2005
Port Alexander	May 2005
Port Lions	June 2005
Old Harbor, Kodiak	June 2005

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TABLE 32-J

STREAM BANK EROSION WORK UNDER SPECIAL AUTHORIZATION EROSION ACTIVITIES PURSUANT TO SECTION 14, PUBLIC LAW 79-526, AS AMENDED (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs
Coordination Account	0
Nenana	0
Big Delta State Historical Park	0
McGrath	0
Akiak	0
Kotlik	0
Northway	0
Port Heiden	0
Mekoryuk	0
Egegik	0
Ninilchik	0
Kwethluk	19,490
Yakatak	0
Chevak	0
King Cove	0
Karluk	0
Deering	11,575
Shishmaref	740,713
Seward	21,868
TOTAL	793,646

TABLE 32-K

ENVIRONMENTAL ACTIVITIES PURSUANT TO SECTION 1135, PUBLIC LAW 99-662

Study Identification	Fiscal Year Costs
Coordination Account	0
Preliminary Restoration Plan	427
Gold Creek Salmon Restoration	0
Valdez Harbor Modification	0
TOTAL	427

TABLE 32-L

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AQUATIC ECOSYSTEM RESTORATION PURSUANT TO SECTION 206, PUBLIC LAW 104-303

Study Identification	Fiscal Year Costs
Coordination Account	0
Swiftwater Park Recreation	0
Preliminary Restoration Plan	4,827
Duck Creek Restoration	5,363
Chester Creek Restoration	47,215
Northway	27,217
Black Lake Ecosystem	218,996
Eklutna, AK	4,982
TOTAL	308,600

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